

marketing

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A black and white photograph of a large group of children sitting at long tables in a cafeteria, eating lunch. The children are smiling and looking towards the camera. The tables are set with plates of food, cups, and napkins. The background shows more children and the typical layout of a school cafeteria.

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Cover page

In communities, towns, and cities across the Nation, children today are getting well balanced lunches in school cafeterias operated for them by local citizens. The noon meals served at school not only provide wholesome low-cost nourishment, a half to a third of daily food needs, but also help the youngsters to develop sound food habits. These are just a few of the benefits of the National School Lunch Program—a unique cooperative endeavor by Federal, State, and local governments to make wise use of our abundant food production.

In recognition of the program's achievements over the past 17 years, Congress in 1962 requested the President to issue annually a proclamation calling for the observance of National School Lunch Week. For 1963, the week starts October 13, with the theme "School Lunch Serves the Nation—Through Food for Learning."

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'Students' check over grain-sampling equipment on display at school near Midville, Ga.



An audience of producers, warehousemen, processors, and others listen to lecture on importance of grain sampling.

A Grain-Grading School in Georgia

By George H. Goldsborough

TRAINING in service to the Nation's agriculture often involves the multiple endeavors of many different government agencies and a great deal of cooperation among a great many people. A recent grain-grading school in Georgia illustrates this.

The school, sponsored by the Georgia Department of Agriculture in cooperation with the Georgia Agricultural Extension Service, took place near Midville, Ga. It was made possible by funds provided under the Matching Fund Program, which is administered by USDA's Agricultural Marketing Service.

J. H. Tutt, grain marketing specialist for the Georgia Department of Agriculture, organized the school as part of a project under the Program, a self-help project authorized by Congress which provides funds to State Departments of agriculture on a matching basis to finance programs designed to improve the marketing of agricultural products.

This school was organized to teach grain grading methods to grain producers, warehousemen, processors and others who might need this specialized knowledge in their work.

The school, the most comprehensive of its type ever held in Georgia, was the first of a series of similar schools,

all designed for the same purpose: to acquaint members of the grain industry with grain grading procedures and techniques.

An example of how such Matching Fund programs are helpful to farmers and processors is shown in the comment of one warehouseman who attended the grain grading school. Bob Evans, prominent Midville, Ga. warehouseman, said of the school: "Grain grading is a subject we all need to know more about. This sort of thing is needed, and this school and others like it will provide valuable information to Georgia millers, warehousemen, and producers."

The one-day school was attended by more than 40 persons. Among subjects covered were: grade-determining factors, importance of sampling, differences in grades and quality, certificates used to show grade, and actual procedures used in determining grades.

Offering professional assistance to the school were two area supervisors from the Inspection Branch of the AMS Grain Division, Herschel Ellis, Baton Rouge, La., and A. M. Allison, Nashville, Tenn. Also conducting classes at the course were R. H. Long, Georgia Agricultural Extension Service, and Bryan Slaton, Georgia Department of Agriculture.

The instructors pointed out that "guess work" has no place in the

determination of grain quality, and that grading should always be carried out by qualified personnel using official grade standards. In the end, as one official pointed out, "grain grading aids the farmer to produce a better product, and to get the market price his product is entitled to."

State department of agriculture officials in Georgia hope that future schools will do much toward improving the overall problem of grain production by helping to improve the quality of grain in Georgia, and by helping to further efficient marketing practices.

Similar self-help projects under the Matching Fund Program are being operated now in 42 States, including our two newest, Alaska and Hawaii. The programs, which cover virtually every phase of agricultural marketing and nearly every agricultural product, are operated partly with funds provided by AMS and partly with funds from the States themselves.

In addition, AMS provides the States with supervision and evaluation of projects, and with expert assistance in solving marketing problems. These programs serve as catalysts to create local solutions to local problems.

As with the grain grading schools in Georgia, cooperation is the keynote of all Matching Fund projects.

(The author is Director of the Matching Fund Program, AMS).

U. S. D. A. marketing researchers develop A Better Oil Test for Soybeans

By Marion E. Whitten and Lewis A. Baumann

A FAST, easy way to use oil content in grading soybeans has now been perfected by marketing researchers in USDA's Agricultural Marketing Service.

Although soybeans are America's major oilseed crop, oil content is not considered in present grade standards. It is true that higher grades of soybeans usually contain more oil than lower grades but there is considerable variation within the grades. And as a result, some growers are underpaid for their soybeans of high-oil content, while others are overpaid for beans of lower oil content.

Oil content is not presently determined at the elevator where the farmer sells his crop because of the difficulty of testing oil content with present methods. The standard laboratory tests used by processors and researchers take at least nine hours for a single sample. Other older testing methods take even longer. But with the new AMS method one man can complete 50 to 55 tests in an average 8-hour day. A single sample takes only 10 minutes to test.

Just as many tests, using older methods, could be initiated in the same period of time, but none of them could be completed in an eight-hour day.

The standard laboratory method is endorsed by the American Oil Chemists Society, and is highly accurate. Three years of testing by marketing researchers show the AMS method to be equally accurate. Accuracy of the AMS method varied only about one-fourth of one percent from an exact average test. Such a precise performance is an important improvement over earlier tests with the AMS method, reported in the April 1958 *Agricultural Marketing*. This improvement in performance now makes the AMS method commercially practical.

The researchers tested their equipment with soybeans grown under varying seasonal conditions for different years, and under the growing conditions of different sections of the country. Over 900 tests have been successfully made over a three-year period under commercial conditions in Illinois, Minnesota, and Mississippi.

In addition to its accuracy, the new 10-minute oil test is also cheaper than the older tests. The new method costs only 61 cents per sample—assuming it is made by a nontechnical employee. In contrast, the standard laboratory method costs \$1.45 per sample, and requires a highly skilled worker to make the test, which takes all day to complete.

Although the chemical and electrical principles of the AMS method would sound complicated to the average person, the testing procedure is easy for anyone to follow. Only two steps are involved: First, a 50-gram sample of soybeans (about 2 ounces) is placed in a high-speed electric grinder-extractor. About a glassful of solvent and a spoonful of silica gel, a fine powder, is added (actually, more precise metric measurements are used).

The grinding and extraction take about four minutes. A somewhat smaller grinder-extractor could do an equally good job but would take about 6 to 7 minutes. In this period, the solvent separates the oil from the beans, and the gel absorbs water from the oil and helps in filtering the sample.

In the next step, the extract is poured into a funnel-like device, which is a pressure filter. The worker then squeezes a bulb on the side of the filter, which forces the filtrate (the liquefied portion of the sample) down through a tube leading to a dielectric meter. This instrument passes a small dielectric current through the liquid.

The greater the amount of oil present, the harder it is for the current to flow through the liquid. The relationship of the oil content to the dielectric current is measured on the meter, and the oil content of the soybeans can be read directly on a dial.

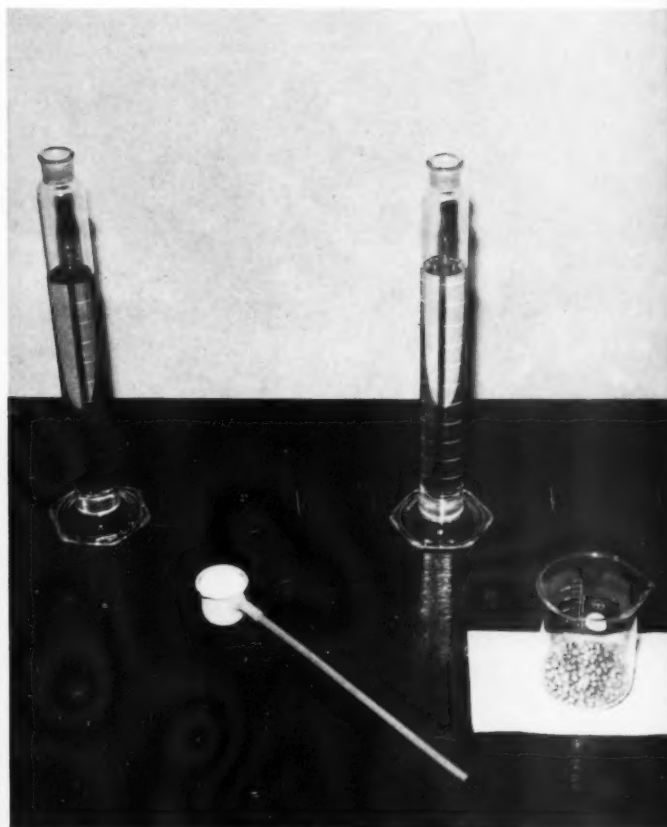
The equipment used in the AMS test is sturdily constructed for heavy use and costs about \$2,400. It would very quickly pay for itself in commercial use, in view of the low cost of individual tests and the convenience of using it in grading operations, in contrast to the standard laboratory test. The AMS equipment takes up a fairly small amount of space and could be set up in a country elevator without disturbing any of the operations.

The equipment includes a dielectric meter and pressure filter plus grinder-extractor, a torsion balance, and a number of cups, flasks bottles, and a dipper. This equipment, plus supplies such as filter paper, can be obtained from several manufacturers. The equipment may also be manufactured by anyone else who is interested, since the patents on it are dedicated to the public.

A similar procedure has been developed for testing oil content in cottonseed. The equipment—and advantages—are practically the same for both cottonseed and soybeans, although minor details differ in testing the two commodities. A technical report on the procedure for testing cottonseed for oil content will be issued soon.

Full details of the new testing method for soybeans will appear in a forthcoming technical bulletin, *Evaluation of a Rapid Method for Determining Oil Content of Soybeans* (T.B. 1296). Single free copies may be obtained from the Office of Information, USDA, Washington, D.C. 20250.

(Both of the authors are members of the staff of the Market Quality Research Division, AMS, USDA.)



Above left, is an overall view of equipment used to make AMS soybean oil test: dielectric meter, grinder, standard sample of soybeans, a "jigger" of silica gel, and a solvent. Closeup photo at right shows a liquefied portion of a sample in the cylinder, "jigger" of silica gel, a cylinder of solvent, and soybean sample. Below, left, metal cup containing pulverized sample is removed from grinder and liquid is poured into funnel leading to dielectric meter, Worker squeezes bulb which forces liquid portion containing oil through a filter and into meter, where oil content is measured on lower dial.



LIVESTOCK

Market Receipts Vs. Slaughter

By Henry J. Uhler

SINCE its beginning in 1916, the Livestock Market News Service of USDA's Agricultural Marketing Service has been extremely rigid, and at the same time, highly flexible in its operations.

As paradoxical as that statement may sound, the extreme rigidity of the Service has been reflected in its strict adherence to the fundamental principles of collecting and disseminating accurate, timely, and unbiased market news which can be easily understood by marketing interests in all parts of the country.

The flexibility of the Service has been characterized by the fact that it has been able to adapt those fundamental principles of reporting to the changing methods and patterns of marketing which have developed in the last half century.

In the early 1900's, the bulk of the slaughter livestock sold in the United States was sold through the larger terminal markets. The Market News Service, consequently, concentrated on reporting transactions at such central markets.

The last 50 years have seen some broad, sweeping changes in livestock marketing practices, however, and the Market News Service has faced a real challenge in keeping up with these changes. In contrast to earlier practices of mainly reporting the larger terminal livestock and central wholesale meat markets, recent efforts have been focused on the reporting of livestock, meat, and wool sales wherever they take place—from production area to

distribution point, and most places in between.

The Market News Service has moved into wholesale meat marketing centers nearer livestock production areas in order to make available carlot meat trade reports. Through Federal-State cooperative reporting programs, the Service has greatly expanded its coverage of livestock auction sales. And equally important, the Service has attempted to keep pace with the trend toward direct sales of livestock in range and feedlot areas. This direct marketing between grower or feeder and buyer has required some major changes in market reporting procedures.

The collection and confirmation of sales information, as well as the observation of the livestock involved in direct transactions, requires reporters to put in many hours of "road work." And the telephone, long an essential tool of the Market News Service, has become even more important in preserving the timeliness of sales information. Reporters are finding, too, that they must devote more attention to the details of individual transactions—times of delivery, weighing conditions and shrinkage, and whether the sale is on a delivered or f.o.b. basis.

While the increase in direct marketings of livestock has posed a number of problems for the Market-News Service, most of them have been successfully overcome. But the shift of a greater proportion of slaughter livestock into direct trading channels has created some difficulties in presenting a composite daily picture of movements to market.

Since the earliest days of livestock

market news reporting, the daily receipts at the 12 leading terminal markets (which currently include Indianapolis, Kansas City, Oklahoma City, Omaha, St. Joseph, St. Louis, Sioux City, Sioux Falls, Chicago, Denver, Fort Worth, and South St. Paul) have provided the industry with a reliable indicator of nationwide trends in livestock marketing.

The daily 12-market receipts have also been used as an indicator of the volume of livestock available for slaughter. However, with the increase in direct marketings of livestock, the AMS Livestock Division conducted a study to determine how closely weekly variations in 12-market livestock receipts corresponded to weekly variations in federally inspected slaughter.

The Division's study indicates that variations in the receipts at the 12 terminal markets during 1960-61 accounted for 50 to 60 percent of the variations in weekly federally inspected hog slaughter. When these same 12-market receipts were added to *Interior Iowa and Southern Minnesota*, and *Interior Illinois* (weekly direct sales reports from areas where extensive direct hog reporting programs are in operation), the resulting figures accounted for more than 90 percent of the variations in slaughter. Thus, the study indicates that hog slaughter can be predicted with a relatively high degree of accuracy by combining the 12-market receipts with these direct area marketings. Data on both types of trading is available daily from the Livestock Market News Service.

The Livestock Division's study also indicated that 12-market cattle receipts



cannot be used to reliably predict cattle slaughter. For purposes of the study, the 12-market receipts were adjusted to eliminate the feeder cattle estimated to be a part of the overall receipts. With this refinement, approximately two-thirds of the weekly variation in federally inspected slaughter could be explained.

While direct cattle sales are reported on a weekly basis, the technique of combining the number of cattle involved in such sales with receipts at the 12 markets cannot be used for predicting variations in federally inspected cattle slaughter. Many cattle traded on a direct basis are not destined for immediate slaughter. Sales often call for future deliveries which may range from a week to as much as 90 days after the sale. On the other hand, many cattle being slaughtered during a particular week may have been purchased many weeks before. Forward contracting is not a prevalent practice in hog marketing.

To depict slaughter and meat production, the Market News Service prepares and issues a weekly estimate of federally inspected slaughter. This report, the *Weekly Meat Production Report*, presents an estimate of federally inspected slaughter and meat production for the previous week. Information in the report, issued each Tuesday, is based on slaughtering operations of a nationwide sample of federally inspected packing plants. The report also breaks down slaughter operations by geographic area, and reflects changes in the average weights of each class of livestock.

Although the increasing shift to direct marketing of livestock has required some changes in both the collection and interpretation of market information, this *Weekly Meat Production Report* has proved to be an excellent primary reference for the entire livestock and meat industry—serving as a reliable guide to orderly marketing for the producer and the buyer. The report is available from any of the Livestock Market News Service's 47 field reporting offices, as are the daily 12 market receipt and direct hog trade figures.

Livestock interests who wish to receive the *Weekly Meat Production Report* by mail may request it from the Administrative Services Division (ML), Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D. C., 20250.

(The author is a member of the Program Analysis Group, Livestock Division, AMS.)



An AMS livestock market news reporter discusses a pen of cattle with his supervisor at a terminal market. Below, many auction markets are reported on a cooperative Federal-State basis. Bottom photo, a reporter interviews a western feedlot operator to gather information for his market reports.



Packaging Chicken Parts Automatically

By James E. Grunig

A CHICKEN drumstick moves along a conveyor to be automatically weighed as it passes over a scale. Then an electronic "brain" transmits this reading to a parts segregator which in turn sets a memory circuit in motion. The circuit "remembers" this weight until it signals a flipper to kick the poultry part from the conveyor into a bin containing drumsticks of the same weight range.

That's how automation has come to one phase of the poultry industry. The device just described—a poultry parts weighing and packaging machine—is separating drumsticks by weight. The machine, designed and developed to specifications set forth by marketing researchers from USDA's Agricultural Marketing Service, has resulted from a revolution in poultry processing—the increased use of specialty items made from individual poultry parts.

But the main function of the machine is not just to separate the parts by weight. A worker, with the machine's aid, can make up packages of parts

weighing just a pound, 2 pounds, or any other desired weight (within a few grams).

There are 11 bins in the machine, each one containing drumsticks 3 grams heavier than those in the previous bin. These weights are selected so the drumsticks combine easily into an even total weight. The drumsticks with the mean weight for the group are automatically "flipped" into the middle bin, the lighter ones in the bins to the left, and the heavier ones to the right.

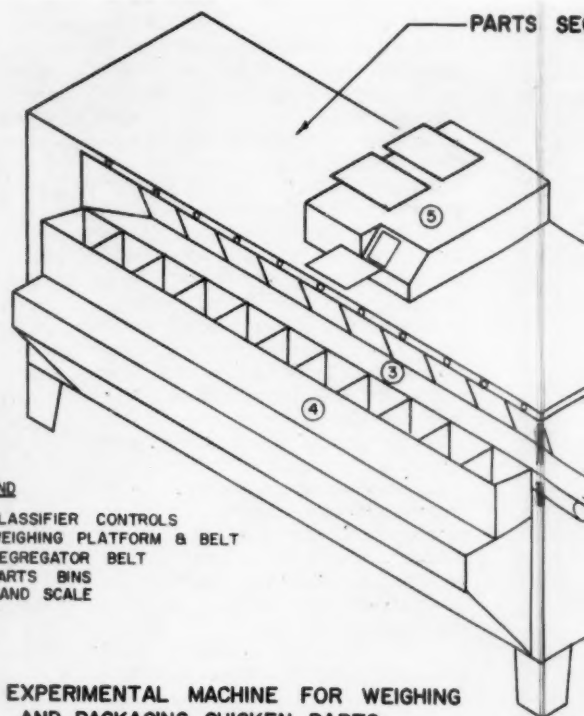
Packaging to an exact weight is child's play to the machine. In some AMS plant tests of the device, drumstick weights were selected so six pieces would make a one-pound package. The operator, in this case, put five drumsticks in a carton placed on a scale in front of him, taking care to balance the heavier parts on the right with lighter ones from the left. To select the sixth piece, he pressed a button which lighted a signal above the bin containing a drumstick which would make exactly a pound package.

The new device is quite a change from the method now commonly used.

A worker must fill a carton until one more piece is needed to make the correct weight. He then selects that part by trial and error—often requiring seven or eight trials before he gets the right one.

This extra packaging is needed because specialty items such as cut-up whole chickens, chicken pies, and packages of poultry parts now use up a third of the broiler meat produced in the United States. A processor necessarily must divide the whole carcasses into wings, drumsticks, thighs, breasts, and backs before he can make some of these specialty items. This cutting up and packaging requires 10 times more labor cost than packing whole carcasses in ice.

A poultry packer also has an allowable weight range around the prescribed weight. But the package usually weighs more than it is supposed to and very seldom less, so the consumer will get what he pays for. Many carcass weight ranges don't give parts that combine easily into a given-weight package, and the processor often "gives away" as much as 2 to 3 ounces of meat per



package.

Such a "give away" for an average large plant—packaging 10 million pounds of chicken parts yearly and "giving away" an average of a half-pound of meat per package (a conservative estimate)—costs the processor 300,000 pounds of meat and \$100,000 a year.

The idea for this machine was born in a joint AMS and University of Georgia Agricultural Experiment Station research project to study whether processors can predict weight of parts from the weight range of carcasses. The data showed such a prediction could be made with accuracy, and the researchers went on to develop the machine. The first device handled only drumsticks, making it less complex and costly for experimental work.

Marketing researchers developed statistical methods to predict weight of parts from weight of carcasses. Then, they used these methods to select carcasses that give parts needed for the machine. However, the AMS marketing researchers uncovered some difficulties with such a method which will

cause them to alter their course. In the future, such a machine will probably be stocked with parts sized and segregated after cut-up operations rather than with parts sized by picking carcasses of a given weight range.

Such a change in emphasis is necessary because groups of carcasses in the same weight range from different flocks don't always yield parts in the same weight range. Also, the average weight within a certain range of carcasses varies from flock to flock, so researchers can't always predict which carcasses will yield the desired number of parts for a given-weight package.

Most important, carcasses yielding drumsticks that combine in even-weight packages don't always give wings, breasts, and thighs that combine in ideal packages.

Even with these problems, marketing researchers already say only one percent extra meat is included when parts are mechanically packaged—about a third of the meat "given away" by hand. Further improvements are probably already on the way as AMS researchers seek more efficient methods

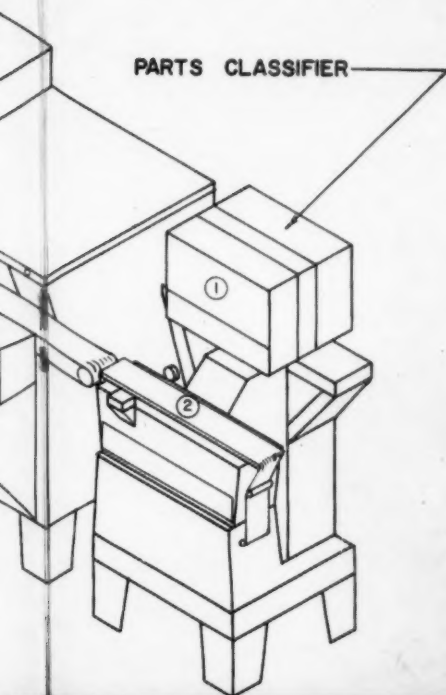
to market farm products.

More information on the background study can be obtained from MRR-604, "Relations of Weights and Sizes of Broiler Parts to Carcass Weights." Write the Marketing Information Division AMS, USDA, Washington, D.C., 20250.

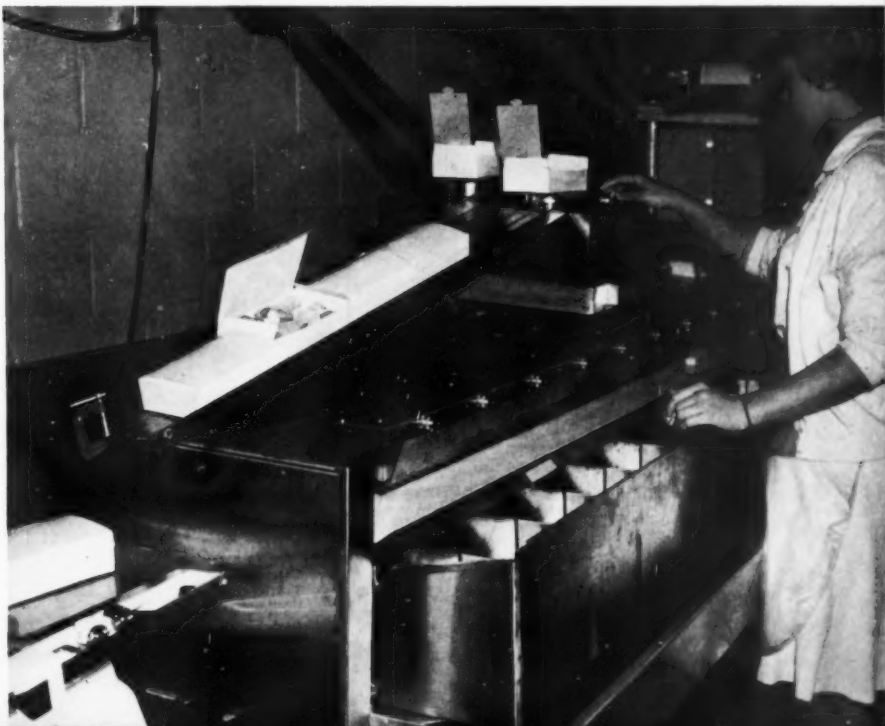
This article is based on a paper presented at the 1963 national meeting of the American Society of Agricultural Engineers and the marketing research report, "Relations of weights and Sizes of Broiler Parts to Carcass Weights." Authors of the paper were Rex E. Childs and Roger E. Walters of the Agricultural Marketing Service at Athens, Ga., and Harold D. White of the College of Agriculture Experiment Stations of the University of Georgia. Authors of the research report were Walters and K. N. May and P. D. Rodgers, of the College Experiment Station of the University of Georgia.

(The author of this article, who now is a senior at Iowa State University, was a student assistant in the Marketing Information Division, AMS, at the time of this writing.)

PARTS SEGREGATOR



The operator uses the machine to fill packages of drumsticks to an exact weight. She places five of the six parts she needs in the package (below) and presses a button to light a bulb above the bin containing a drumstick that will combine with the others to give an exact-weight package (left).



By Harold F. Breimyer

The second of two articles

Issues Of The Day In Marketing

Last month's article named five characteristics of farm products which affect their marketing. These were (1) the time interval between production and marketing; (2) perishability of many products; (3) smallness of each farmer; (4) variability in quantity, quality, and timing of output; and (5) remoteness of farm from consumer. It also listed various ways in which marketing today departs from traditional market exchange (either central or decentralized). These include market orders and agreements, support prices, contractual selling, bargaining associations, cooperative marketing, and efforts to negotiate delivery prices.

THE system of marketing farm products has proved fluid and capable of adjusting to new challenges.

Trouble is, often when a change is made to deal with one problem, another crops up.

Without a doubt, U.S. agriculture will be forced to respond to the incessant, urgent demand that its products be marketed with more regularity and uniformity. The days when farmers could produce what they wanted to and sell them when the mood struck, and consumers had to take what they got—are on the wane. They won't return.

The call for orderliness in marketing is being answered by several changes in the marketing system. Many of them fall in the broad category of verti-

cal integration, which essentially refers to telescoping two or more of the successive stages in marketing. It is done by combining the stages within a single ownership (including cooperatives ownership), as when a meat packer feeds cattle in his own feedlot; or by some kind of contractual arrangement, as in many broiler-production contracts.

Through vertical integration a processor, distributor, or retailer assures himself of the kind of supply of farm products he wants by controlling the basic production, either contractually or by outright ownership. (This is sometimes called "integration backward." There also is integration forward. However, this article is not concerned with vertical integration as such but with its significance to marketing).

Surely, there can be no single, neat judgement of approval or disapproval of all vertical integration in farm marketing. But neither can issues it raises be disregarded. Public issues in the various kinds of vertically integrated or coordinated marketing promise to be burning ones for years to come. They will get about as much attention as any in agriculture.

Issues in vertical integration bear so much on marketing because under integration, traditional markets are bypassed. Market exchange no longer serves as the basis for arriving at the price of farm products and, thereby, at returns to producers and costs to

middlemen. Generally, for market pricing, integration substitutes pricing by individual negotiation.

The Protection of Market Exchange

Yet traditional market exchange, however conducted, has been relied on for generations as a bastion of protection for farmers and middlemen in buying and selling farm products. The idea that there shall be free and open market exchange, with many buyers competing vigorously for the products offered, is a deep-seated one. It embodies many of our principles of freedom, equity, and justice.

Laws of the land have long been directed to preserving competition in markets. The anti-trust and Federal Trade Commission laws and regulations have that objective. So does the Packers and Stockyards Act, which provides for regulation of the marketing of livestock and poultry.

Furthermore, in many of those laws and in the history-making Packers' Consent Decree of 1920 (reaffirmed in 1960), there is prohibition not only against a large firm's acquiring too much of its own market, but also against its reaching up or down and wielding power in either its supplying or distributing markets. For example, in the Consent Decree the specified meat packers agreed that they would not own or operate stockyards, and that they would not engage in retailing. The

various laws and regulations have had much to do with preserving a system of market exchange for the marketing of farm products.

To be sure, a degree of vertical integration can exist side by side with traditional markets. Ironically, many contracts in marketing rely on the existence of traditional markets, as they specify prices from those markets to fulfill contract terms. Contracts of that kind thus depend on the very kind of markets they tend to displace.

In another sense, wherever vertical integration becomes at all widespread it challenges if not threatens the continued existence of traditional markets for the same products. It does so because a few firms frequently dominate the integrated part of the total production and therefore wield much influence on the non-integrated part. It does so also because the size of the remaining open market is reduced. It has fewer sellers and especially fewer buyers.

The court decision in the recent Brown Shoe Company case cited "the primary vice of a vertical merger or other arrangement tying a customer to a supplier (to be) that by foreclosing the competitors of either party from a segment of the market otherwise open to them, the arrangement may act as a 'clog on competition' which 'deprives . . . rivals of a fair opportunity to compete'."

And so the various arrangements that by-pass traditional market exchange, whatever their other merits, raise serious questions as to whether, and how, the interests of farmers and others can be protected as well as is done in the traditional system. A good case can be made that the interests of the individual farmer, for example, are not protected as well in vertically integrated relationships as in the traditional market exchange system.

Questions are raised as to what kinds of vertically integrated arrangements shall be regarded as desirable and permissible under our philosophy and laws that favor a freely competitive economy in preference to either a privately monopolized or a governmentally managed one.

Policy questions arise as to whether, and where, coalesced power in farm markets shall be (a) regulated or broken up or (b) offset by putting comparable power in the hands of farmers or other disadvantaged groups. Doubtless each has a place.

There are questions as to whether the traditional market system is being helped to do the kind of job now asked

of it. Are private and government services to marketing adequate to achieve the timeliness and precision that are now expected—in addition to the efficiency and equity that have long been sought?

And questions will persist as to whether some kinds of services should be designed to facilitate contractual marketing just as services were devised in the past to assist in open market exchange. It may be necessary to find new ways to assure that the farmer's bargaining position in marketing is fair and equitable. Those ways will vary: they will be chosen to fit both the nature of the product and the kind of market to which it goes.

For example, sales under advance contract will doubtless become more common. Means to protect the farmer's interest in them will almost certainly be found—means comparable with the protection now provided in exchange markets.

Rules of trading will likely be updated. A flexible approach to both private and public services to marketing is essential in a dynamic economy.

Even so, as much circumspectness, as acute critical judgement, will enter into choosing market services in the future as in the past. There still can be no tolerance of a nihilistic "anything goes" principle in marketing. Today as always, the farmer expects that, having invested time and money in producing his crops and livestock, he will not be denied a chance to realize a proper return when he markets them. The middleman hopes to be able to meet his needs for a regular supply of products of uniform, reliable quality. The consumer, who stands inconspicuously at the end of the marketing line, wants to be sure his wants and wishes are not lost in the shuffle, but effectively met.

(The author, who is economist to the Administrator, Agricultural Marketing Service, is on a year's leave of absence serving on the University of Illinois staff. An article of Mr. Breimyer's entitled "The Three Economies of Agriculture," which appeared in the August 1962 issue of the JOURNAL OF FARM ECONOMICS, was cited recently as that publication's best article of the year.)



Packers and Stockyards district supervisor and a cattle dealer discuss market practices. All livestock dealers, whether they operate at stockyards, as here, or in the country, are subject to regulation under the P&S Act if they conduct any business across State lines.

SCHOOL LUNCH SERVES THE NATION— THROUGH FOOD FOR LEARNING

By Herbert D. Rorex

SOME 16 million school children going back to their classrooms this month will be learning to enjoy a variety of U.S.-produced foods through the nutritious lunches they get at school.

This is the goal of the National School Lunch Program, established in 1946 to safeguard the health and well-being of our Nation's youth and to expand markets for our agricultural abundances. It is administered nationally by USDA's Agricultural Marketing Service.

In recognition of the program's achievements over the past 17 years, Congress in 1962 requested the President to issue annually a proclamation, calling for the observance of National School Lunch Week. For 1963, the Week starts October 13, with the theme "School Lunch Serves the Nation—Through Food for Learning."

Truly, this program does serve the Nation, for while these thousands of local food service operations go about their task of providing wholesome meals for school children over the Nation, they are also putting to good use tremendous quantities of U.S. farm products—well over \$800 million worth last year.

If the food used in last year's lunch program activities was loaded on one freight train, it would have to be 137,000 cars long and reach 1,000 miles down the track. All that food

means lots of business for farmers, food processors, packers, wholesalers, and retailers throughout the Nation.

Most of the food, four-fifths, is bought by the individual schools from their local suppliers. The remaining fifth is made up of contributions of food from the Federal Government to assist local school lunch managers in providing nutritious lunches at low cost.

Because of its nationwide service to children, the School Lunch Program has proved to be an important stimulus to market development for many foods. Through school lunches—many new or unfamiliar foods have been introduced and brought to the attention of the consuming public; familiar foods have been processed or packaged in new form for more convenient use; and demand has been built up for many foods in areas where they had not been marketed before.

Historically, school lunch has given great impetus to development and expansion of markets for nonfat dry milk, stabilized dried eggs, and canned citrus products. Many of the current refinements, which have brought renewed consumer interest to these products, can be traced to their early use in school lunches.

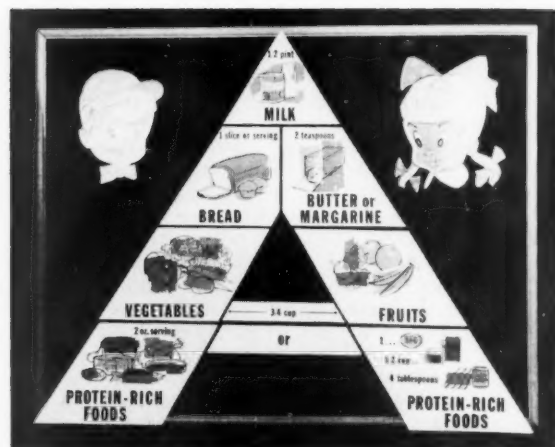
Rolled wheat made from hard red winter wheat was recently introduced to school lunch programs all over the Nation through Federal purchases. It met with such enthusiastic response from school lunch managers that the wheat industry initiated new market

development work. Over the summer, market tests on rolled wheat were conducted in retail stores in Blackwell, Oklahoma, by the Oklahoma Wheat Growers Association and the Kansas Wheat Commission.

One of the latest introductions in school lunchrooms is bulgur, a cracked whole wheat product, which retains most of the nutrients of the whole grain wheat. Bulgur is often used as a side dish along with a meal, or is good in various meat dishes, stuffings for poultry or fish, and may be used in making rolls. The extent to which school lunch managers can make good use of bulgur is yet to be determined.

Sometimes familiar and well-liked foods are difficult to use in school lunchrooms for one reason or another. Experience has shown that tailoring the product to suit school lunch needs can pay off in expanded markets. In the case of frying chickens, for example, school lunch managers had found it difficult to estimate how much to buy and how to portion the chicken for children's lunches.

Working with the poultry industry, school lunch home economists and poultry marketing specialists solved the problems of portioning and packaging. When the frozen frying chicken parts were introduced to the School Lunch Program in 1961, they proved an instant success. Markets were expanded for chicken and school children are now eating more of one of their favorite foods.



Last year pork, another old favorite, was given slightly different processing, designed especially for school lunches. Eighteen million pounds of pork canned with natural juices instead of gravy was federally purchased and shipped to school lunch operations nationwide.

This large quantity of pork, however, was only enough to serve each child in the program five to six lunches. But it was enough to give school lunch managers an opportunity to get acquainted with this high-quality product. Lunchroom managers reported they were highly pleased with the canned pork because it was very good in salads as well as in main dishes. And best of all the children liked it. Now many of the managers are supplementing their meat supply by buying canned pork in natural juices direct from their local tradesmen.

Many food producers and distributors have found new geographic markets through the National School Lunch Program. Children in the Mid-

west are now eating Southern sweet potatoes, long a regional delicacy. Children in the Southeast have learned to enjoy purple plums from the Northwest. Canned grapefruit sections are popular items in areas where many children had never tasted grapefruit before they had it with their school lunches. After a nationwide distribution of fresh Bartlett pears, a store owner in Louisiana reported he couldn't keep a large enough supply of canned Bartletts on his shelf to meet the new demand. Cornbread, another regional favorite, new to California children with school lunches, is now in demand as a weekly feature.

By serving a variety of food in complete nourishing meals, the National School Lunch Program encourages children to become educated food shoppers who will buy and use many different foods. With the trend towards more and more eating out, the program also prepares children to make wise and varied choices from restaurant and

cafeteria menus.

Nationwide, the National School Lunch Program is an amazing network of 68,000 small enterprises operated by local citizens for the benefit of their children. These schools operating under the program provide lunches for one out of every three school children in the United States. Cumulatively, the school lunch program is a \$1¼-billion food industry serving 2.7 billion lunches a year in schools in all 50 States, the District of Columbia, Guam, Puerto Rico, the Virgin Islands, and American Samoa.

This adds up to a vast market for food. With the number of school age children increasing every year, the opportunities for expanding and developing food markets are bound to grow, as school lunch continues to serve the Nation through food for learning.

(The author is Chief of the School Lunch Branch, Food Distribution Division, Agricultural Marketing Service, USDA.)

NATIONAL SCHOOL LUNCH WEEK Oct. 13-19



Agricultural Marketing Service

U. S. DEPARTMENT OF AGRICULTURE

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Quality Standards for Manufacturing Milk

By Ed Small

A STRIDE forward was taken last June toward encouraging quality improvement in manufacturing milk and assuring the efficient and sanitary manufacture of better, more dependable quality dairy foods.

After several years of development, quality standards for manufacturing milk were made available by USDA's Agricultural Marketing Service for voluntary adoption by the States.

The work was undertaken by the Dairy Division of the Agricultural Marketing Service to encourage a uniform approach to quality improvement of manufacturing milk over the Nation. The standards were developed in close collaboration with the National Association of State Departments of Agriculture.

The first draft of the standards was distributed to industry, colleges, State departments of agriculture and similar State agencies for review and comments in the summer of 1959. Following this, several revisions were prepared and distributed, based on correspondence and meetings with industry groups, State agencies, and others interested.

The final standards represent a combination of the many ideas and suggestions received. Supervision of the program, once adopted by a State, rests entirely with that State.

The milk quality and production requirements of the program, combined with the plant specifications, are high enough to challenge the capabilities of the dairy industry and to provide an incentive for progress—yet they're realistic enough to be attainable. The standards have been prepared so they can be met by small as well as large dairy farmers, with a minimum financial outlay. The standards provide for farm inspection and certification, platform inspection of the raw milk supply,

and plant quality-control service.

Farm certification requires compliance with five fundamental factors of good quality milk production:

- (1) Health of the herd
- (2) Milking facilities and housing
- (3) Milking procedure
- (4) Design, construction, and sanitation of the utensils and equipment, and
- (5) Water supply.

Minimum facilities are required at the farm, but the main emphasis is on sanitary methods and practices. Each farm is rated in terms of specific factors based on an appropriate farm score card.

Primary responsibility for certifying a farm rests with a qualified fieldman. But suspension, revocation, or reinstatement of a farm is made only by State-employed inspectors.

Each farm producing and selling milk for the manufacture of dairy foods must be inspected and certified within 24 months of the time a State adopts the standards, and again each year after the initial certification. Second aspect of the program deals with *platform inspection of the raw milk*. Milk delivered to plants must comply with certain quality specifications as to odor, physical appearance, bacteria, and sediment content.

Testing for bacteria and sediment content is done each month, and a routine sight and odor examination is made as milk is received at the plant. To be acceptable, milk must be fresh and sweet.

If a producer has not met the bacteria and sediment requirements, the fieldman visits his farm within seven days from the date of the second consecutive substandard test. The visit is made to correct any deficiencies in the producer's facilities or milk handling practices.

Plant licensing, the third aspect of

the program, requires compliance with essential elements relating to: (1) premises, buildings, and facilities; (2) equipment and utensils; and (3) plant operations.

Included are such checks as maintenance of buildings, sanitation, laboratory control, water supply, employee cleanliness and health, waste disposal, transportation of raw milk, cooling, storage, and packaging of the finished products.

All plants are inspected by the State agency administering the standards. Plants must qualify for licensing within 12 months following the effective date of the standards.

Due to wide variations in the quality of manufacturing milk in various areas of the country, adoption of the recommended standards will require more time for some areas than for others.

To facilitate its adoption of the standards, a State may provide for a delay of up to five years, where necessary, in requiring can milk producers to meet the milkhouse and milk cooling standards.

Issuance of the standards is one of the first steps toward achieving uniformly higher quality milk for the manufacture of dairy foods.

The next step toward this achievement rests with milk producers, dairy products manufacturers, and State departments of agriculture or other appropriate State agencies. All have complementary roles to play.

Copies of the "Minimum Standards for Milk for manufacturing Purposes and Its Production and Processing" may be obtained by writing to the Dairy Division, Agricultural Marketing Service, USDA, Washington, D.C., 20250.

(The author, recently retired, was Chief of the Standardization Branch, Dairy Division, Agricultural Marketing Service, at the time the story was written.)



Udders and flanks of milking cows must be clipped of long hairs and, just before milking, washed or wiped with a clean damp cloth or paper towel moistened with a sanitizing solution, then wiped dry. This is one of the farm certification requirements of the standards. Equipment used in handling milk, such as milking machines, must be washed, rinsed, and drained after each milking, and must be sanitized before each milking. Milk handling equipment must be stored in suitable facilities, and must be maintained in good condition. Milk in cans must be cooled to 60 degrees or lower right after milking unless it's delivered to the plant within two hours after milking. And the refrigerated unit must be kept clean.



Improved Quality Standards for Wheat

ACCEPTANCE of U.S. wheat in foreign markets is of critical importance to American growers. More than half our total production moves into these markets. And increasing competition in the world markets has intensified the need for wheat of more dependable quality.

Everybody knows it—but what can be done? What can producers, processors, handlers, exporters, and other segments of the wheat industry do. What has already been done about the problem?

For the past two years, USDA's Agricultural Marketing Service has been reviewing the official U.S. wheat standards, in cooperation with members of all segments of the wheat industry, with State departments of agriculture and other State agencies, and with State and commercial inspection agencies.

Throughout a series of meetings, attention was called to the real purpose of the standards: to constitute a measure of wheat value that can be used by the buyer and seller—both domestic and foreign—in terms that will measure end-use value.

Questions were raised, "Do the present standards *really* meet the needs of buyers and sellers?" "Are they too weak to encourage acceptance of U.S. wheat in important cash markets?" "Which standards, if any, need improvement right away?" "How should they be changed?"

As a result of some 30 meetings, a lot of discussion, and a lot of study and research, several weaknesses in the standards were exposed and sorted out for possible improvement. Noted in particular was the wide variation of quality in each of the grades.

Consequently, on August 1, USDA proposed a revision of the present wheat standards—to adjust them to advancements in the methods of meas-

uring quality and of drying, cleaning, and handling wheat, and to improve the competitive position of U.S. wheat in foreign markets.

The proposal calls for a narrowing of the quality range within grades of wheat and for certain other changes. Here are the details:

One change would set maximum limits in the numerical grades—No. 1, 2, 3, 4 and 5—for total defects, such as damaged kernels, foreign material, and shrunken and broken kernels.

Another proposed change, a related one, will lower the limits of shrunken and broken kernels. Both these changes will reduce the amount of unmillable material now permitted, to provide a cleaner, more merchantable product.

Another change proposed concerns dockage—material other than wheat which is removed by cleaning. It would require that dockage be stated by whole and half percent, instead of whole percent as at present. This change will make the standards more specific so they will better reflect the quality of wheat.

Still another change would place wheat with more than 13.5 percent moisture in the "Tough" category. Tests have shown that wheat with more moisture than this cannot normally be stored without going out of condition.

Still another change would recognize higher than normal test weights per bushel (such as 62 pounds for Hard Red Winter Wheat) by providing for a special grade, "Heavy," for grades No. 1, 2, and 3 of five classes of wheat.

Another would change the subclass name Western White Wheat. Buyers contend this subclass is very nonuniform because of the variation in the amount of white club wheat it is permitted to contain. The new name would be Mixed White Wheat, which

is more descriptive of the subclass. The percentages of White Club and Common White Wheat would be made a part of the grade designation.

Another change calls for discontinuing the smut dockage method for appraising the quantity of smut in a lot of wheat, since the scouring method to determine smut dockage is no longer used. Smut-free varieties and improved cleaning techniques have eliminated much of the smut problem.

A further change would eliminate Western Red wheat in the official standards, since this wheat is no longer produced to any great extent.

PUBLIC hearings have been scheduled during October to consider the proposals. They are:

Kansas City, Mo., Oct. 1
Minneapolis, Minn., Oct. 4
Portland, Ore., Oct. 8
Toledo, Ohio, Oct. 11

Interested persons—particularly those who cannot attend the hearings—have been invited to submit their views and comments on the proposals by mail. They should be addressed to the Grain Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C., 20250. Deadline for comments to be received is Oct. 31. Copies of the proposed changes are available from the same address.

Wheat is one of the most important agricultural crops in terms of dollar value and quantity exported. Therefore, our wheat growers, processors, handlers, and exporters stand to gain much from meaningful grades and standards to describe those grades.

This language must be kept constantly up to date to describe accurately the quality of wheat for the uses to be made of it, and to bring about confidence and goodwill throughout the channels of national and international trade.

